MISSISSIPPI RIVER SEDIMENT DELIVERY SYSTEM
BAYOU DUPONT MARSH CREATION PROJECT (BA-39)

Background:

The Mississippi River Sediment Delivery System – Bayou Dupont Marsh Creation Project (BA-39) project is located in the Barataria Basin within Jefferson and Plaquemines parishes, about 3.7 miles northwest of Myrtle Grove. The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force designated BA-39 as part of the 12th Priority Project List in 2003. The Environmental Protection Agency (EPA) is the lead federal sponsor for this project with funding approved through the Coastal Wetlands Planning, Protection and Restoration Act of 1990 by the United States Congress and the Wetlands Conservation Trust Fund by the State of Louisiana. The Louisiana Department of Natural Resources (LDNR) is the local sponsor. The LDNR Coastal Engineering Division performed the engineering and design services. The total estimated fully funded cost for the project is $28.9M.

The objective of the project is to create approximately 493 acres of sustainable marsh. This project constitutes using the renewable resource of Mississippi River sediment to create marsh in a rapidly eroding and subsiding section of the Barataria landbridge. Now converted to mostly open water, the poor condition of this marsh is likely due to a combination of subsidence, dredging of oil and gas canals, and lack of freshwater input. The project area is located near the Mississippi River and is a prime opportunity to utilize the relatively new initiative of creating marsh using Mississippi River sediment as opposed to hydraulically dredging material from within the Barataria Basin.

Timeline:

- The Task Force approved design funding in January 2003 ($2.7M).
- Final plans and specifications were completed in 2007.
- The Task Force approved construction funding in January 2008 ($21M).
- LDNR awarded a construction contract in the amount of $20,719,145.50 and issued a Notice to Proceed to Great Lakes Dredge and Dock Company, LLC in February 2009.
- Great Lakes Dredge and Dock Company began construction in April 2009.
- Construction Completed in May 2010
- Vegetative Planting Performed in June 2010

Project Facts and Features:

- 26,800 linear feet of earthen containment dikes was constructed to facilitate the creation of approximately 493 acres of intertidal marsh at a constructed elevation of +2.0' NAVD 88.
- Marsh platform expected to settle to a target marsh elevation of +1.3' NAVD 88 after 10-years.
- Approximately 2,300,000 cubic yards of sandy material was placed in two marsh creation areas.
- A third area of approximately 87 acres was funded through a NOAA ARRA Grant and CWPPRA funds.
- First CWPPRA project utilizing renewable river sediment to create marsh. River sediment brings new sediment into the system and is not the normal project where a borrow site from an interior area is used.
- Mississippi River sediment was hydraulically dredged by the *Florida*, a 36", 16,000 HP cutter suction dredge, between Mississippi River Miles 63 and 65. The sediment was pumped approximately 5 miles.
- Two permanent 48" smooth steel casing pipes were installed underneath LA Highway 23 and New Orleans and Gulf Coast Railway to facilitate the temporary placement of a dredge slurry pipeline.
- Intertidal marsh vegetation was planted post-construction. Approximately 26,000 units were planted.
- No maintenance is anticipated, and EPA and OCPR will continue to monitor the project over the 20-year project design life.

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